

IDA DOCUMENT D-646

MANAGING UNCERTAINTY: SOVIET VIEWS ON  
DECEPTION, SURPRISE, AND CONTROL

Andrew W. Hull  
Andrew J. Aldrin  
Peter B. Almquist

August 1989

*Prepared for*  
Strategic Defense Initiative Organization

19980513 141

**DISTRIBUTION STATEMENT A**

Approved for public release;  
Distribution Unlimited

**DTIC QUALITY INSPECTED 4**

PLEASE RETURN TO:

BMD TECHNICAL INFORMATION CENTER  
BALLISTIC MISSILE DEFENSE ORGANIZATION  
7100 DEFENSE PENTAGON  
WASHINGTON D.C. 20301-7100



INSTITUTE FOR DEFENSE ANALYSES  
1801 N. Beauregard Street, Alexandria, Virginia 22311-1772

U01986

## DEFINITIONS

IDA publishes the following documents to report the results of its work.

### Reports

Reports are the most authoritative and most carefully considered products IDA publishes. They normally embody results of major projects which (a) have a direct bearing on decisions affecting major programs, or (b) address issues of significant concern to the Executive Branch, the Congress and/or the public, or (c) address issues that have significant economic implications. IDA Reports are reviewed by outside panels of experts to ensure their high quality and relevance to the problems studied, and they are released by the President of IDA.

### Group Reports

Group Reports record the findings and results of IDA established working groups and panels composed of senior individuals addressing major issues which otherwise would be the subject of an IDA Report. IDA Group Reports are reviewed by the senior individuals responsible for the project and others as selected by IDA to ensure their high quality and relevance to the problems studied, and are released by the President of IDA.

### Papers

Papers, also authoritative and carefully considered products of IDA, address studies that are narrower in scope than those covered in Reports. IDA Papers are reviewed to ensure that they meet the high standards expected of refereed papers in professional journals or formal Agency reports.

### Documents

IDA Documents are used for the convenience of the sponsors or the analysts (a) to record substantive work done in quick reaction studies, (b) to record the proceedings of conferences and meetings, (c) to make available preliminary and tentative results of analyses, (d) to record data developed in the course of an investigation, or (e) to forward information that is essentially unanalyzed and unevaluated. The review of IDA Documents is suited to their content and intended use.

The work reported in this document was conducted under contract MDA 903 89 C 0003 for the Department of Defense. The publication of this IDA document does not indicate endorsement by the Department of Defense, nor should the contents be construed as reflecting the official position of that agency.

This Document is published in order to make available the material it contains for the use and convenience of interested parties. The material has not necessarily been completely evaluated and analyzed, nor subjected to formal IDA review.

Approved for public release; distribution unlimited.

Accession Number: 1986

Publication Date: Aug 01, 1989

Title: Managing Uncertainty: Soviet Views On Deception, Surprise, And Control

Personal Author: Hull, A.W.; Aldrin, A.J.; Almquist, P.B.

Corporate Author Or Publisher: Institute For Defense Analyses, 1801 N. Beauregard St., Alexandria, VA Report Number: IDA D-646

Report Prepared for: Strategic Defense Initiative Organization (SDIO/SI/CM), Washington, D.C. 20310-7100

Descriptors, Keywords: Soviet Secrecy Combat Deception Camouflage Reduction Decoy Warhead Technology Deployment Maskirovka Surprise Control Operation Uncertainty

Pages: 036

Cataloged Date: Nov 28, 1989

Contract Number: MDA903-89-C-0003

Document Type: HC

Log Number: IDA HQ 89-34715

Number of Copies In Library: 000001

Record ID: 20904

NOT IN DROS 9/28

# REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

Public Reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE August 1989	3. REPORT TYPE AND DATES COVERED Final--November 1988 to June 1989	
4. TITLE AND SUBTITLE Managing Uncertainty: Soviet Views on Deception, Surprise, and Control			5. FUNDING NUMBERS C - MDA 903 89 C 0003 T - T-R2-597.07	
6. AUTHOR(S) Andrew W. Hull, Andrew J. Aldrin, Peter B. Almquist				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Institute for Defense Analyses 1801 N. Beauregard St. Alexandria, VA 22311			8. PERFORMING ORGANIZATION REPORT NUMBER IDA Document D-646	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Strategic Defense Initiative Organization (SDIO/SI/CM) Washington, DC 20301-7000			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words)  This document, prepared for the Director of the Countermeasures Office of the Strategic Defense Initiative Organization (SDIO), presents three separate discussions of how Soviet military and political leaders deal with the issue of uncertainty. In the first two cases (deception and surprise), the emphasis is on how the Soviets seek to sow uncertainty in the minds of the enemy and how the Soviets then plan to use that uncertainty to gain military advantage. The third case focuses on Soviet views of control and how they use control to minimize the deleterious effects of uncertainty on their own operations.				
14. SUBJECT TERMS Strategic Defense Initiative, Soviet, deception, Maskirovka, surprise, control			15. NUMBER OF PAGES 36	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT SAR	

IDA DOCUMENT D-646

MANAGING UNCERTAINTY: SOVIET VIEWS ON  
DECEPTION, SURPRISE, AND CONTROL

Andrew W. Hull  
Andrew J. Aldrin  
Peter B. Almquist

August 1989



INSTITUTE FOR DEFENSE ANALYSES

Contract MDA 903 89 C 0003  
T-R2-597.7

## ABSTRACT

This document, prepared for the Director of the Countermeasures Office of the Strategic Defense Initiative Organization (SDIO), presents three separate discussions of how Soviet military and political leaders deal with the issue of uncertainty. In the first two cases (deception and surprise), the emphasis is on how the Soviets seek to sow uncertainty in the minds of the enemy and how the Soviets then plan to use that uncertainty to gain military advantage. The third case focuses on Soviet views of control and how they use control to minimize the deleterious effects of uncertainty on their own operations.

## CONTENTS

Abstract .....	iii
Tables .....	vii
Executive Summary .....	S-1
I. INTRODUCTION .....	I-1
II. MASKIROVKA IN SOVIET MILITARY DECEPTION.....	II-1
A. Evaluating the Effectiveness of Maskirovka Operations .....	II-5
B. Concluding Observations.....	II-9
III. THE SOVIET VIEW ON SURPRISE .....	III-1
A. The Role of Surprise in Soviet Military Thought .....	III-1
B. Achieving Surprise .....	III-2
1. Misleading the Enemy as to One's Own Intentions .....	III-3
2. Maintaining the Secrecy of Plans and Preparations .....	III-4
3. The Use of New Weapons and Combat Techniques .....	III-5
4. Correct Choice of Direction and Timing of the Main Strike .....	III-6
5. Unexpected Use of Fire by All Types of Forces and Rapid Maneuver Which Make the Enemy's Response Difficult .....	III-7
6. Deception and Maskirovka.....	III-7
7. Skillful Use of Terrain, Weather, and Time .....	III-7
C. Conclusions .....	III-7
IV. THE NATURE AND IMPORTANCE OF CONTROL TO THE SOVIETS .....	IV-1
A. Roots in Tradition .....	IV-1
B. Types of Control .....	IV-2
1. Political Control .....	IV-2
2. Military Operational Control .....	IV-4
C. Operational Implications .....	IV-6
D. Conclusions .....	IV-8

## TABLES

1. Implementing Lapshin's Formula.....II-8
2. Implementing Lapshin's Formula.....II-9



## **EXECUTIVE SUMMARY**

This document presents three separate discussions of how Soviet military and political leaders deal with the issue of uncertainty. The examinations of deception and surprise emphasize how the Soviets seek to sow uncertainty in the minds of the enemy and how they intend to use uncertainty for gaining military advantage. Conversely, the chapter on Soviet views of control stresses how they use control to minimize the deleterious effects of uncertainty on their own operations.

### **A. MASKIROVKA (DECEPTION)**

Soviet notions of maskirovka have a number of implications for those concerned with planning and implementing SDI. These include:

- There are five Soviet techniques for implementing maskirovka: (1) camouflage, (2) simulations, (3) feigns, (4) disinformation, and (5) peacetime technical deception.
- The Soviets place great stress on the importance of maskirovka in all military operations. Hence, any Soviet plans for dealing with SDI will probably include one or more forms of deception.
- Camouflage, the most widely used form of maskirovka, makes use of all natural and artificial means to cover military movements, positions, and directions. It especially strives to reduce or eliminate optical, radar, infrared, or acoustic signals. Given the importance assigned to camouflage (and the frequency of its employment), SDIO program plans should anticipate its wide spread use in Soviet responses.
- The Soviets strongly favor using large numbers of increasingly sophisticated decoys, dummies, and false weapons effects to mislead a variety of enemy sensors. Hence, at least for planning purposes, SDIO should expect the Soviets to employ large numbers of decoys, some of which may be rather sophisticated.
- A Soviet operations research-type formula suggests that as the overall inventory of nuclear warheads decreases, the value of decoys rises. Thus, a successful START agreement to reduce U.S.-Soviet nuclear inventories drastically could well lead to more frequent Soviet use of deceptive techniques.

- There is strong historical precedence for the Soviet engaging in a peacetime program of technical deception aimed less at creating technical problems and more on inhibiting development and deployment through public opinion. Judging from past behavior, the Soviets will not favor "one time" demonstrations. Instead, they will construct a long-term program to demonstrate a capability without betraying their actual intentions. Furthermore, Soviet decisionmakers will probably be concerned lest these demonstrations "boomerang" by creating undesirable responses from the U.S.

## **B. SURPRISE**

Soviet military theorists believe that surprise, especially at the beginning of a war, can have a decisive effect on the outcome of strategic operations. This is because surprise can stun the enemy, paralyze his will to resist, and prevent him from launching a coordinated counteroffensive. Surprise plays an important role in the success of tactical operations as well.

Soviet military writings and past operations suggest that military planners believe the following:

- Achieving surprise, even if only minimally successful, is worth the effort.
- The strategic value of surprise is particularly high at the beginning of a conflict
- Surprise becomes increasingly difficult to achieve as operations move from the tactical to the strategic level.
- Surprise can be achieved by mobilizing forces in the guise of conducting training exercises and maneuvers.
- Technological surprise (especially the introduction of radically new types of weapons) can have revolutionary impact on military affairs. At the same time, this is difficult to achieve given long RDT&E lead times and improved intelligence collection capabilities.
- Technological surprise is more often achieved by using existing weapons in innovative ways, even if it means using them in a less than optimal manner.
- Choosing the right direction and timing for a strike is critical to gaining surprise.
- Skillful use of terrain, weather, and time can produce surprise. For example, attacking at the "wrong" time of day or under the "wrong" weather conditions can have devastating effect on an enemy lulled into complacency by his own preconceptions.

- Surprise is achieved by massing firepower in unexpected ways due to increased range and/or loading of weapons. Thus, firepower can be concentrated without having to concentrate forces.

Soviet concepts of surprise have a number of implications for SDIO:

- The Soviets will almost certainly try to use surprise against SDS, especially in the initial phase of strategic operations.
- Technological surprise is more likely to involve using existing systems in innovative ways, at seemingly inappropriate times, or in unsuspected areas rather than in developing new weapons which are hidden away until conflict begins.
- Soviet maneuvers and training exercises must always be treated by SDS system managers as potential mobilizations for actual combat operations.

## C. CONTROL

For cultural and pragmatic reasons, Soviet leaders emphasize strict, centralized, top-down control both over and within the military. Consequently, control has become such a central feature of Soviet strategic culture that it serves as a benchmark for Soviet leaders in judging the desirability of specific courses of action.

The Soviet control philosophy has a number of operational implications, including:

- Communist Party assertion of primacy over defense matters, especially those dealing with strategic forces.
- Employment of multiple instruments and techniques of control.
- Preference for man-in-the-loop type control, even when technological means of control are in place.
- Emphasis on strong, positive control over strategic weapons.
- The entire thrust of centralized decisionmaking and direction of field elements appears aimed at eliminating the freedom of choice from commanders at all levels. The consequences of this appear especially severe below the division level where leadership seems more a matter of efficiently implementing and executing predetermined plans than of decisionmaking.
- Soviet soldiers believe "initiative is punishable" even though officially exhorted to take the initiative. Thus, they tend to "buck" decisions up to higher authorities or to implement directives in a narrow fashion.

- Emphasis on top-down control over as wide a variety of issues as possible places a premium on ensuring leadership survival and on having robust, redundant command and control capabilities.

The foregoing has a number of implications for assessing the attractiveness of potential Soviet responses to any U.S. defense initiative. These include:

- Responses consistent with the present Soviet philosophy of tight, centralized, top-down control over strategic systems are likely to be seen as more attractive.
- Options which permit Soviet decisionmakers to employ trusted people to provide man-in-the-loop type control are probably more attractive than those which rely on technical means only.
- Soviet political leaders seem to place such a high premium on maintaining control that they are willing to accept some operational ineffectiveness and curtailment of initiative among those assigned to carry out military operations.
- Soviet political leaders appear uncomfortable with military initiatives which might jeopardize their control links to the military in general and to strategic forces in particular.

## I. INTRODUCTION

The following chapters focus on how Soviet military and political leaders seek to deal with uncertainty, both in the sense of how to impart uncertainty to adversaries and how to avoid the deleterious effects of uncertainty on their own military operations. In doing so, the report combines discussions on Soviet views of maskirovka (deception), surprise, and control--all originally published as short, stand-alone white papers for the Countermeasures Office of the Strategic Defense Initiative Organization.

As initially conceived, each paper was "backgrounder" for engineers and scientists on the Technical Red Teams about significant elements of Soviet military style and standard operating procedures. Although these white papers originally were drafted with members of the Technical Red Teams in mind, they serve equally well to introduce any non-Soviet specialist to major concepts that help shape Soviet decisions. The papers were also part of a continuing effort by the Countermeasures Office to identify Soviet political, operational, bureaucratic, and military constraints that could influence the development and application of technical countermeasures.

*Strategic deception, whether military or political, has been an integral feature of the Slavic tradition. Mongol methods of warfare masterfully deflected enemy attention toward false threats, a lesson absorbed by their Muscovite vassals and, in turn, their tsarist successors. The mirage quality of Russian political deception is captured by Potemkin's notorious "villages"... John Dziak<sup>1</sup>*

## II. MASKIROVKA IN SOVIET MILITARY THOUGHT

As a formal term, maskirovka is unique to the Soviet military and is defined in the *Soviet Military Encyclopedia* as:

a complex of measures directed towards misleading the enemy regarding the presence and position of troops, distinguishing military equipment, their condition, military preparedness and activities and also plans of the command. Maskirovka assists in the achievement of surprise of active troops, preserving their combat preparations and raising the work life of equipment.<sup>2</sup>

*The Soviet Military Encyclopedia* goes on to identify four "means of accomplishing maskirovka": (1) camouflage, (2) simulation, (3) feigns, and (4) disinformation.<sup>3</sup>

Not surprisingly, camouflage (closely related to the U.S. military concept of "cover") is the most common form of maskirovka.<sup>4</sup> It is achieved by using either natural or artificial means to reduce or eliminate optical, radar, infrared, or acoustic signals.<sup>5</sup> Soviet military theorists stress that every combat activity should consider virtually any

---

<sup>1</sup> John Dziak, "Soviet Deception: the Organizational and Operational Tradition," in *Soviet Strategic Deception*, Lexington Books, Lexington, 1987, p. 3.

<sup>2</sup> The rank importance of maskirovka is surmised from the order in which Soviet military writers list means of combat support. In recent writings, maskirovka is listed behind only reconnaissance, and protection from nuclear strikes. It is listed ahead of engineering support, chemical protection, security, and several other means categorized as technical combat support.

<sup>3</sup> *Sovetskaia Voennaia Entsiklopediia*, Vol. 5, p. 176.

<sup>4</sup> *A Comparative Lexicon of U.S.-Soviet Military Technical Terminology*, McLean, VA: BDM Corp., 1988, p. 159.

<sup>5</sup> *Sovetskaia Voennaia Entsiklopediia*, Vol. 5, p. 175. It is interesting to note that in an article in the restricted journal *Voennaia Mysl'* the author notes that camouflage may also be used to protect friendly reconnaissance systems or troops from detection. This is the only source in which this reference appears. See, Adam, Kh. (Eng. Lt. Col.) and Sebel, R. (Lt. Col.), "Military Camouflage," *Voennaia Mysl'*, No. 11, November 1971, pp. 63-68, as translated in *FBIS, Foreign Press Digest*, No. 0004, 1974, pp. 79-86.

natural or technical means of concealing troop movements, positions, or directions as a routine part of operational planning. Camouflage is also the only means of maskirovka which may be instituted by troops without prior direction of the commander.<sup>6</sup>

The Soviet concept of maskirovka goes beyond concealment to stress the importance of showing the enemy what is not really there (an important departure from the U.S. concept). The first technique for accomplishing this is simulation (*imitatsiia*) which relies on decoys, dummies, and false weapons effects to create erroneous impressions about friendly weapons, installations, or force groupings.<sup>7</sup> Of these simulation techniques, decoys are the most often employed. During World War II for example, Stalin claimed that the Red Army employed as many as 5,000 decoy tanks and 2,000 decoy aircraft in some battles.<sup>8</sup> In addition to deploying decoys in large numbers, the Soviets are adopting increasing sophistication with their simulations in response to improvements in Western reconnaissance capabilities. In recent combat training exercises, for instance, maskirovka specialists used decoy tanks and artillery pieces with heaters inside to create an appropriate thermal signature to go along with the standard optical signature.<sup>9</sup>

A third, less common form of maskirovka, is feigns or demonstrations (*demonstrative deistvie*). This involves false military troop movements to mislead the enemy regarding the true location, direction, and timing of an attack, or whether an attack will take place at all.<sup>10</sup> In contrast to the other means of maskirovka, demonstrations require that troops actually be committed to unproductive operations. For example during the Belorussian maskirovka operations, Soviet military economists estimated that "simulating the concentration of an army, consisting of eight rifle and two artillery divisions, a tank corps, and army rear services was achieved at a cost of approximately 200,000 man days and a vast quantity of materials over a period of one and one-half months."<sup>11</sup> Using another type of deceptive feign prior to the Belorussian offensive in World War II, troops constructed defensive fortifications to convince the enemy that the

---

<sup>6</sup> Ibid., p. 144.

<sup>7</sup> Heuer, op. cit.

<sup>8</sup> Earl F. Ziemke, "Stalingrad and Belorussia: Soviet Deception in World War II," in Donald C. Daniel and Katherine L. Herbig, *Strategic Military Deception*, New York: Pergamon, 1982, p. 256.

<sup>9</sup> Maj. Yu. Klenov, "Saper khiter," *Kraznaia Zvezda*, January 30, 1988, p. 3.

<sup>10</sup> SVE, op. cit.

<sup>11</sup> Chuyev, Yu. V. and Mikhaylov Yu. B., *Forecasting in Military Affairs*, Moscow: Voenizdat, 1975, p. 55, as translated in USAF Soviet Military Thought series, No. 16.

Soviets were not planning an offensive in the sector in which the offensive actually took place.

The dissemination of false information (*dezinformatsiia*) is the fourth method of maskirovka. One must be careful, however, to distinguish military from political disinformation. The *Soviet Encyclopedic Dictionary* notes there is a separate definition for military disinformation. The first, more political, definition states that disinformation is for "the achievement of propaganda,"<sup>12</sup> while the military definition states that disinformation is intended to mislead the enemy. (As noted earlier, in this paper we are only concerned with the military aspects, and so we will concentrate on the military definition of disinformation.)

Military disinformation programs are developed at the operational and strategic levels.<sup>13</sup> There is an obvious problem for Soviet military planners with the dissemination of disinformation in that commanders must be either aware of the true information or unwitting players in the larger maskirovka plan. As a result, the use of military disinformation is fairly limited.

Nonetheless, there are a number of examples of *dezinformatsiia*. Immediately prior to launching an offensive during the Manchurian campaign Soviet troops were issued training manuals for defensive operations. More recently, a defecting Czech intelligence officer (a specialist in active measures) reported a large Czechoslovak military disinformation project that used the news media as a channel for military disinformation.<sup>14</sup> One of the more interesting and recent examples of a disinformation program took place in Afghanistan. In the week preceding the invasion, local Soviet advisors were able to disarm two Afghani divisions, one of which was garrisoned inside Kabul, by telling them that their tanks, ammunition and anti-tank rockets had to be turned in for maintenance and inventory.<sup>15</sup>

---

<sup>12</sup> "Dezinformatsiia," *Sovetskii Entsiklopedicheskii Slovar'*, Moscow: Sovetskaia Entsiklopediia, 1987, p. 368.

<sup>13</sup> "Dezinformatsiia," *SVE*, op. cit. It is significant to note that disinformation was defined as taking place only at the operational and strategic levels. This suggests that it is not to be performed at the tactical levels.

<sup>14</sup> Heuer, Richard J., "Soviet Organization and Doctrine for Strategic Deception" in Daily, Brian D., and Parker, Patrik J., *Soviet Strategic Deception*, Lexington Books, Lexington, 1987.

<sup>15</sup> Valenta, Yuri, "Soviet Use of Surprise and Deception," *Survival*, 24 March/April 1982, p. 56.



Soviet military theorists discuss only four means of maskirovka, most of which take place during or immediately prior to combat, but there is at least one additional form of maskirovka which falls outside the scope of these definitions. We refer to this as peacetime technical deception. By peacetime technical deception, we mean attempts to mislead the enemy regarding the capabilities or other technical characteristics of weapons systems during peacetime with the aim of creating a more favorable correlation of forces.

Soviet attempts to deceive the West regarding the capabilities and numbers of their strategic weapons systems have been perhaps the most publicized examples of maskirovka. However, this type of maskirovka is not referred to by any Soviet military theorists. As a result though, we do not have any definitive way of describing how the Soviets think about this type of deception. Nonetheless, some conclusions can be drawn from past Soviet behavior in this respect.

Various programs of maskirovka with strategic weapons have been ongoing since the early days of the cold war. Under Nikita Khrushchev, maskirovka in the nuclear age took the form of a strategic bluff to convince the West that the Soviet Union not only possessed a vast quantity of nuclear weapons and the means of delivering those weapons, but also possessed the will to use those weapons.

In one of the more publicized examples, on Air Force Day in 1955, the Soviets flew BISON bombers by the viewing stand twice, thereby giving U.S. Air Force attachés, who depended upon the parades as one of their sole sources of intelligence, the impression that the Soviet Union had many more bombers than they actually possessed. The technique was effective, insofar as it served to generate a perception of a "bomber gap" in the United States. From the Soviet perspective, however, the ploy ultimately proved counter-productive, as it spurred U.S. production of B-52s.

Apparently Khrushchev did not learn this lesson well, as in the late 1950s and the early 1960s, using the success of the Soviet space program as cover, he again attempted to "bluff" the Soviet Union into superpower status by capitalizing on the U.S. lack of photoreconnaissance capabilities.

Certain American generals and admirals...allege that the Soviet Union has few intercontinental rockets...[Almost certainly it had no operational ICBMs at this time.] But this, after all, is what the American military men assert. It should be said, however, that it is always better to count the money in your own pocket than that in the other fellow's. I might say, incidentally, that

we have enough rockets for America, too, should war be unleashed against us....<sup>16</sup>

There have been other, more recent, cases of maskirovka, primarily associated with arms control. According to one U.S. analyst during the course of the SALT I negotiations, "the Soviets constructed decoy submarines and placed them in normal berthing areas. U.S. intelligence uncovered and counted six SSBNs as operational, allowing the USSR to have a higher level of submarines in the SALT existing level count."<sup>17</sup> This later allowed the Soviets to construct six "real" submarines without violating the SALT I agreement. In the late 1960s and the early 1970s the Soviet designers were allegedly placing additional accelerometers, which transmitted false data, aboard their ICBMs during tests. U.S. intelligence picked the readings from all accelerometers and concluded that Soviet ICBMs were less accurate than was actually the case.<sup>18</sup> Since the U.S. military planners use the accuracy of Soviet missiles as a driver for their own strategic forces, the Soviet deception had the effect of reducing the pressure to increase the budgets for strategic modernization. Using the same logic, immediately following ICBM tests in 1985, Soviet soldiers were observed digging false impact craters which again indicated that Soviet missiles were less accurate than intelligence sources had previously believed.<sup>19</sup>

#### A. EVALUATING THE EFFECTIVENESS OF MASKIROVKA OPERATIONS

Soviet military planners have a propensity to systematize theoretical concepts. As a result, they have developed mathematical calculations for most combat activities.<sup>20</sup> Therefore, it is hardly surprising that Soviet military theorists have developed a mathematical methodology for evaluating maskirovka (see below). In 1973, in the restricted distribution Soviet military journal, *Voennaia Mysl'*, Col. K. Lapshin wrote:

---

<sup>16</sup> Izvestiia, May 5, 1959. Cited in Horelick, Arnold L., and Rush, Myron, *Strategic Power and Soviet Foreign Policy*, University of Chicago Press, Chicago: 1966, p. 61.

<sup>17</sup> Sloss, Leon, "Impact of Deception on U.S. Nuclear Strategy," in Daily, Brian D., and Parker, Patrik J., *Soviet Strategic Deception*, Lexington, 1987, p. 442.

<sup>18</sup> Wright, Peter, *Spy Catcher*, New York: Dell, 1987, p. 268, and Epstein, Edward Jay, *Disinformation: Or, Why the CIA Cannot Verify an Arms-Control Agreement*, Commentary No. 7, July 1982, p. 26.

<sup>19</sup> Bill Gertz, "Soviets fill craters, dig new ones to fool U.S. on missile accuracy," *Washington Times*, August 7, 1985, p. A1.

<sup>20</sup> Tarakanov, p. 5.

When making decisions pertaining to camouflaging troops and installations it is essential not only to make a qualitative assessment of its effectiveness under specific conditions, but also quantitatively to estimate anticipated results.<sup>21</sup>

The formula developed by Lapshin was as follows:

$E_c = P_o - P_{det}(K)$  where  $K$  is determined by the formula:

$$K = \frac{1}{P_{du}(N_{du}) + \frac{1}{P_{det}(N_g)}}$$

Legend:

$P_{det}$  = probability of detection of object (decoy or actual)

$P_{du}$  = probability enemy will take decoy to be genuine

$N_{du}$  = number of decoys

$N_g$  = number of genuine objects

$P_o$  = probability of detection of genuine installation without camouflage

$K$  = probability that each detected object is genuine

$E_c$  = effectiveness of camouflage (maskirovka).

Although his methodology is apparently applicable to other forms of combat as well, it is interesting to note that Lapshin directed his conclusions towards nuclear war. He summarized his conclusions as follows:

Dummy installations help protect genuine positions, but only when the number of nuclear warheads assigned to targets is less than the total number of detected (genuine and decoy) objects.

In this case, the enemy must select targets without knowing for sure which ones are genuine. Therefore, nuclear strikes will inevitably be delivered partially against dummy and partially against genuine installations.

---

<sup>21</sup> Lapshin K. (Col.), "On Evaluating the Effectiveness of Camouflage Troops and Installations From Aerial Reconnaissance," *Voennaya Mysl'*, No. 6, June 1973, pp. 35-42, as translated in *FBIS Foreign Press Digest*, No. 0031, 5 June 1974, p. 49.

In other cases the enemy will be able to destroy all detected genuine positions or installations as well as decoys. Consequently the survival of genuine positions or installations depends in large measure on the achieved degree of concealment (just as for camouflage without the employment of dummy positions). Although dummy positions will not help improve the protection of genuine positions, they will draw from the enemy a greater consumption of warheads than would be required to take out detected genuine positions or installations.

Therefore the effectiveness of dummy installations, when the enemy possess the capability of hitting all detected targets, should be viewed not from the standpoint of success in camouflage, but rather from an operational standpoint. The adversary, having overexpended ammunition in one area, will be unable to utilize that ammunition for carrying out missions elsewhere.<sup>22</sup>

The implications of Lapshin's assessment are important to consider. In the current climate, where the United States possesses well over 10,000 strategic nuclear warheads, decoys probably have little effect as both sides have an ample amount of ammunition. However, when one considers a future scenario in which those numbers are reduced to around 6,000, the values for decoys increase significantly.

For illustrative purposes, if we assume that the Soviets adopt a very different force structure consisting of 3,000 single warhead land-based mobile missiles with another 3,000 distributed over sea-based and airborne platforms, the ability of the Soviets to conceal their land-based systems becomes very important. For instance, if they build 3,000 decoy missiles and are able to keep the U.S. ability to detect either decoys or missiles to below 0.50 ( $P_{det}$ ), with a 90 percent probability that the U.S. will believe that decoy targets are real ( $P_{du}$ ), then the Soviets could expect to have 2,164 missiles undetected by U.S. sensors. This is a considerable improvement over 386, which is the number of missiles which the Soviets could expect to go undetected assuming they did not deploy decoys and that the U.S. had a 90 percent probability of detecting the missiles (see Table 1).

Lapshin's formula may also be applied to the problem of what mixture of decoys and camouflage is to be used against a U.S. system. When applied to this problem, the aspect which stands out most is the value which the formula places upon concealment. For example, if the Soviets were able to use fast burn boosters, or some other means, to evade U.S. sensors to the point where they were only able to detect and track 50 percent of the

---

<sup>22</sup> Lapshin, p. 49.

**Table 1. Implementing Lapshin's Formula**

	Baseline						Mobile missile force						
P <sub>det</sub>	0.90	0.75	0.50	0.25	0.10	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
P <sub>du</sub>	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
N <sub>du</sub>	3,000	3,000	3,000	3,000	3,000	3,000	500	1,000	2,000	3,000	4,000	5,000	
N <sub>g</sub>	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
P <sub>o</sub>	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
K	0.50	0.45	0.36	0.22	0.10	0.50	0.86	0.75	0.60	0.50	0.43	0.38	
E <sub>c</sub>	0.45	0.56	0.72	0.85	0.89	0.45	0.13	0.22	0.36	0.45	0.51	0.56	
Missiles	1,350	1,677	2,164	2,537	2,670	1,350	386	675	1,080	1,350	1,543	1,688	
<p>P<sub>det</sub> = probability of detection of object (decoy or actual).  P<sub>du</sub> = probability enemy will take decoy to be genuine.  N<sub>du</sub> = number of decoys.  N<sub>g</sub> = number of genuine products.  P<sub>o</sub> = probability of detection of genuine installation without camouflage.  K = probability that each detected object is genuine.  E<sub>c</sub> = effectiveness of camouflage (maskirovka).</p>													

objects launched (P<sub>det</sub>), assuming 3,000 decoys (N<sub>du</sub>), such as fake launch plumes, and the U.S. ability to discriminate with 50 percent accuracy (P<sub>du</sub>), then the Soviets would expect 1,950 of the 3,000 missiles launched to evade detection and tracking. Similar calculations could be applied to other phases of the strategic exchange with similar results (see Table 2). Even if the Soviets used no decoys, given that the other parameters remained the same, the Soviets would still expect that 1,200 of their missile launches would not be detected and tracked. Assuming that Lapshin's formula is actually used for planning purposes, this is a powerful argument for Soviet use of camouflage as a counter to space-based defense systems. Naturally, this argument must be weighed against such considerations as the cost and technical feasibility of camouflage.

**Table 2. Implementing Lapshin's Formula**

	Vary $P_{det}$ (camouflage-clouds)				Vary $P_{du}$ (decoy quality)				Vary $N_{du}$ (add decoys)				OPTIMIZED
$P_{det}$	0.90	0.75	0.50	0.25	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.50
$P_{du}$	0.50	0.50	0.50	0.50	0.50	0.75	0.90	0.10	0.50	0.50	0.50	0.50	0.75
$N_{du}$	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	4,000	5,000	6,000	5,000
$N_g$	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
$P_o$	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
$K$	0.64	0.60	0.50	0.33	0.64	0.55	0.50	0.90	0.64	0.57	0.52	0.47	0.29
$E_c$	0.32	0.45	0.65	0.82	0.32	0.41	0.45	0.09	0.32	0.38	0.43	0.47	0.76
Missiles	964	1,350	1,950	2,450	964	1,227	1,350	270	964	1,149	1,298	1,421	2,271
$P_{det}$ = probability of detection of object (decoy or actual). $P_{du}$ = probability enemy will take decoy to be genuine. $N_{du}$ = number of decoys. $N_g$ = number of genuine products. $P_o$ = probability of detection of genuine installation without camouflage. $K$ = probability that each detected object is genuine. $E_c$ = effectiveness of camouflage (maskirovka).													

## B. CONCLUDING OBSERVATIONS

The foregoing discussion of the purpose, means, and usage of military deception by the Soviets has a number of implications for those concerned with planning and implementing SDI. These include:

- The Soviets place great stress on the importance of maskirovka in all military operations. Hence, any Soviet plans for dealing with SDI will probably include one or more forms of deception.
- Camouflage, the most widely used form of maskirovka, makes use of all natural and artificial means to cover military movements, positions, and directions. It especially strives to reduce or eliminate optical, radar, infrared, or acoustic signals. Given the importance assigned to camouflage (and the frequency of its employment), SDIO program plans should anticipate its widespread use in Soviet responses.

- The Soviets strongly favor using large numbers of increasingly sophisticated decoys, dummies, and false weapons effects to mislead the enemy. Hence, at least for planning purposes, SDIO should expect the Soviets to employ large numbers of decoys, some of which may be rather sophisticated.
- A Soviet operations research-type formula suggests that as the overall inventory of nuclear warheads decreases, the value of decoys rises. Thus, a successful START agreement to reduce U.S.-Soviet nuclear inventories drastically could well lead to more frequent Soviet use of deceptive techniques.
- There is strong historical precedence for the Soviets engaging in a peacetime program of technical deception aimed less at creating technical problems and more on inhibiting development and deployment through public opinion. Judging from past behavior, the Soviets will not favor "one time" demonstrations. Instead, they will construct a long-term program to demonstrate a capability without betraying their actual intentions. Furthermore, Soviet decisionmakers will probably be concerned lest these demonstrations "boomerang" by creating undesirable responses from the U.S.

### III. THE SOVIET VIEW ON SURPRISE

#### A. THE ROLE OF SURPRISE IN SOVIET MILITARY THOUGHT

Soviet military thinking is based on the premise that basic principles of war and combat can be determined. One of the most important of these principles is that "surprise brings success in a battle or operation" and can be decisive at the strategic (affecting the course and outcome of the war), operational (affecting operations), and tactical (affecting engagements) levels.<sup>23</sup> As a result, the Soviets have devoted much attention both to using surprise effectively and to avoiding being surprised.<sup>24</sup>

During World War II, the Soviets considered surprise a "transitory factor," that is, one whose impact could be overcome. With the deployment of nuclear weapons in the mid 1950s, however, a surprise nuclear strike could destroy an enemy in a matter of hours; surprise became a decisive factor. During the 1960s, the Soviets concluded that a war need not begin with an exchange of nuclear strikes, and, in fact, could have a lengthy conventional phase.<sup>25</sup> Surprise conventional strikes during this period could substantially alter the "correlation of forces," both nuclear and conventional, in the attacker's favor. Still, "in the event of achieving strategic surprise by the aggressor and the unpreparedness of the other side to promptly launch retaliatory strikes, a war could be quickly over."<sup>26</sup>

---

<sup>23</sup> See the discussion of principles of war in V.Ye. Savkin, *The Basic Principles of Operational Art and Tactics* (Moscow: Voenizdat, 1972), translated by the US Air Force and published as volume 4 of the Soviet Military Thought Series (Washington, DC: U.S. Government Printing Office, 1979), p. 230; P.A. Zhilin, *The History of Military Art* (Moscow Voenizdat, 1986), translated by the Joint Publications Research Service, JPRS-UMA-87-004-L, March 27, 1987, p. 305; and L. Kuleszynski, "Some Problems of Surprise in Warfare," translated from the Polish and abridged in the journal of the Soviet General Staff, *Military Thought*, May, 1971, pp. 97-108 at p. 97.

<sup>24</sup> While the Soviets study both these aspects of surprise, this paper focuses on the Soviet use of surprise. For a brief discussion of Soviet concern about being surprised, see Andrew W. Goldberg, "Western Analysts Reappraise Soviet Strategic Policy," *The Washington Quarterly*, Spring, 1989, pp. 201-213, at pp. 203-204.

<sup>25</sup> See Zhilin; and "Lectures from the Voroshilov General Staff Academy," *The Journal of Soviet Military Studies*, Vol. 1, No. 1 (April 1988), pp. 29-53, at pp. 41-44.

<sup>26</sup> Zhilin, op. cit., p. 302.



The ability to surprise an enemy is especially critical during the "beginning period of war," because the Soviets recognize that the effect of surprise can be overcome if a war is drawn out. The Soviet objective in a war is to make decisive strikes as early as possible to bring the war to a favorable close as quickly as possible. The objective of using surprise is to stun the enemy, paralyze his will to resist and prevent him from launching a coordinated counteroffensive.

## **B. ACHIEVING SURPRISE**

According to Soviet military authors, surprise is achieved through several related means:

- misleading the enemy as to one's own intentions;
- maintaining the secrecy of plans and preparations;
- the use of new weapons and combat techniques;
- correct choice of direction and timing of the main strike;
- unexpected strikes by aircraft, artillery, and tanks, and the surprise use of fire by all types of forces;
- rapid maneuver and decisive action which make the enemy's response difficult;
- deception and maskirovka; and
- skillful use of terrain, weather, time of year, and time of day.<sup>27</sup>

While surprise, in the Soviet view, is increasingly difficult to achieve as one moves from the tactical to the strategic level of warfare, strategic surprise is especially important during the beginning period of a war. Historic examples of such strategic surprise include the German invasion of the Soviet Union in June, 1940 (Operation Barbarossa), and the Japanese attack on Pearl Harbor. The immediate result of each of these attacks was to undermine Soviet and U.S. capabilities to participate in the war; the long-term result was to provide textbook examples of how to achieve surprise in warfare.

---

<sup>27</sup> See M.M. Kir'yan, "Vnezapnost'" [Surprise], *Sovetskaya voyennaya entsiklopediya* [Soviet Military Encyclopedia], Vol. 2 (Moscow: Voenizdat, 1976), pp. 161-163, and David M. Glantz, "Surprise and Maskirovka in Contemporary War," *Military Review*, December, 1988, pp. 51-57.

## 1. Misleading The Enemy As To One's Own Intentions

Misleading a potential enemy takes place in both peace and war, and the Soviets write with grudging respect about German use of diplomacy to mask Nazi intentions. The Germans, for example, concluded trade agreements with countries they were simultaneously preparing to attack.<sup>28</sup>

The Soviets have used the same basic techniques in their invasion of Czechoslovakia in 1968 and Afghanistan in 1979. While planning military intervention in these countries, Soviet diplomats and military officials were meeting with the Czech and Afghan political leadership. Whether these were, in fact, last-minute efforts to obtain satisfaction without using force is, of course, unclear. The result, however, was that Soviet forces arrived in Czechoslovakia after negotiations had apparently defused the situation, and in the Afghan case, forces were sent under the guise of protecting President Amin.<sup>29</sup>

Perhaps the most popular tool in masking Soviet military activities in peacetime has been the use of exercises, allowing the mobilization of a number of troops near a troubled region. An attacker "in the guise of training exercises and maneuvers...tries to implement operational deployment of forces and means and preparation of them to inflict a surprise first strike."<sup>30</sup> One important aspect of this approach is that it desensitizes the target. The attacker need only wait until the target fails to respond to the "spoof." A second consideration is that the exercises provide a degree of coercion short of actual intervention. The Soviet-led invasion of Czechoslovakia was preceded by extensive exercises along the border, allowing the mobilization of forces and logistics support and providing a clear signal of dissatisfaction to the Czech leadership. The same techniques were used in dealing with Poland in 1980 and 1981, although with a different results. After numerous exercises (the first of which were apparently poorly planned and implemented), the likelihood of

---

<sup>28</sup> S.P. Ivanov, *The Initial Period of War* (Moscow: Voenizdat, 1974), translated under the auspices of the United States Air Force in the Soviet Military Thought Series, No. 20 (Washington, DC: U.S. Government Printing Office, 1986), Chapter 6.

<sup>29</sup> See Valenta, *op. cit.*; and Raymond Garthoff, *Detente and Confrontation: American Soviet Relations from Nixon to Reagan* (Washington, DC: The Brookings Institution, 1985), pp. 910-913.

<sup>30</sup> N. Vasendin and N. Kuznetsov, "Modern Warfare and Surprise Attack," *Military Thought*, June 1968, pp. 42-48, at p. 43.

Soviet intervention seemed to be increasing when the Polish leadership imposed martial law.<sup>31</sup>

Misleading the enemy in war is also important. During World War II, the Germans were adept at using diversion to cover their true plans, creating army units which were deployed along the "expected" axis of attack, rather than on the axis actually used. The victims' erroneous belief that they understood the German plans was "confirmed" by a German deceptive effort.

## 2. Maintaining the Secrecy of Plans and Preparations

Keeping the "true" Soviet plans and intentions secret is just as important as misleading the enemy about them. Using World War II again as an example, the Soviets write of the German success in keeping their plans secret, in part through keeping the number of people with detailed knowledge to a minimum and by informing subordinates of orders at the last minute.<sup>32</sup> In the Soviet Union, tight compartmentalization and centralized control are the rule.<sup>33</sup> This compartmentalization has extended to the highest levels of the Soviet leadership. For example, during the SALT negotiations the Soviet senior military representative suggested that U.S. negotiators were providing too much data *on Soviet equipment* to Soviet civilian delegates, and Politburo members who did not sit on the Defense Council were denied specific military information.<sup>34</sup>

The General Staff organizations responsible for developing specific plans and operations are reportedly quite small. While little first-hand information is known about the Soviet Main Operations Administration at present, the Czech General Staff's counterpart included only about a dozen people in the late 1960s, as did the Polish Operations

---

<sup>31</sup> The Soviets may find themselves unable to use exercises as a cover in the future due to arms control agreements which limit the size of exercises, require advance notification, and provide on-site monitoring.

<sup>32</sup> Ivanov, op. cit., pp. 141-142; and M.M. Kir'yan, *Vnezapnost' v nastupatel'nykh operatsiyakh Velikoy Otechestvennoy voyny* [Surprise in the Offensive Operations of the Great Patriotic War] (Moscow: Nauka, 1986), p. 31.

<sup>33</sup> See the previous study in this series, "The Nature and Importance of Control to the Soviets," by Andrew W. Hull.

<sup>34</sup> Richard D. Anderson, Jr., "The Defense Council, Succession Politics, and Soviet Military Spending," in U.S. Congress, Joint Economic Committee, *Soviet Military Economic Relations* (Washington, DC: U.S. Government Printing Office, 1983), pp. 57-68, at p. 59; and John Newhouse, *Cold Dawn: The Story of SALT* (New York: Holt, Rinehart, and Winston, 1973), p. 56.

Administration of the early 1980s. Only these officials and a small number of military and political leaders were privy to the entire "plan."<sup>35</sup>

Compartmentalization is not always successful, of course. Soviet planning for intervention in Poland in 1980 was reported almost immediately to the United States by a Polish General Staff officer involved in the process.<sup>36</sup> Such intelligence information from East European sources suggests that the Soviet war-planner needs to deal not only with internal Soviet secrecy, but also that of his allies. Soviet planners have three basic options: to keep plans secret from their allies, to inform their allies fully, or to manipulate their allies by presenting incomplete or distorted information.

### 3. The Use of New Weapons and Combat Techniques

Former Chief of the Soviet General Staff N.V. Ogarkov argued that "changes in military affairs are dictated by changes first and foremost in weapons and military equipment."<sup>37</sup> As a result, military planners must be concerned about technical surprise and the possibility of a "secret weapon" against which there is no defense and which may change the way a war is waged.<sup>38</sup>

The Soviets, however, do not use the term "technical surprise," preferring instead to focus on the use of equipment which is new or unexpected in particular situations. A new weapon system might provide dramatically improved mobility or maneuverability, have significantly greater range, or be able to carry a heavier payload than the enemy anticipates. It should be emphasized, however, that a new weapon system need not depend on a major breakthrough in weapons technology; improved production, for example, may make it possible to field a weapon more quickly, more cheaply, or in greater numbers than expected by the enemy.

---

<sup>35</sup> See Jan Sejna and Joseph D. Douglass, Jr., *Decision-Making in Communist Countries: An Inside View* (Cambridge, MA: Institute for Foreign Policy Analysis, 1986), pp. 54-47; and Ryszard Kuklinski, "The Crushing of Solidarity," *Orbis*, Vol. 32, No. 1 (Winter 1988), pp. 7-31.

<sup>36</sup> The Soviet plan was reportedly to intervene with 15 Soviet divisions, two Czech divisions, and one German division under the guise of the "Soyuz 8" Exercises. See Kuklinski, op. cit.

<sup>37</sup> N.V. Ogarkov, *Vsegda v gotovnosti k zashchite otechestva* [Always in Readiness to Defend the Fatherland] (Moscow: Voenizdat, 1982), translated in *Soviet Press Selected Translations*, September/October, 1982, November/December, 1982, and January/February, 1982. Quotation in November/December, 1982, p. 314.

<sup>38</sup> See Savkin, op. cit., p. 235.

Technical surprise, especially on the strategic scale, is very difficult to achieve, especially with the continuing improvements in reconnaissance and intelligence collection capabilities.<sup>39</sup> Because technical secrets cannot be kept long, one Soviet author argues that the basic means of achieving surprise with new weapons must rest on how they are used, rather than the technology itself.<sup>40</sup>

This is not to say that technical surprise is impossible. Domestic technical progress and/or covert acquisition of technology from abroad can lead to faster-than-expected weapon acquisition.<sup>41</sup> Or it is possible that western intelligence may simply miss a development program because of its size or location.

#### 4. Correct Choice of Direction and Timing of the Main Strike

Choosing the direction and timing of the strike is critical for surprise, requiring the optimization of the attack's direction and timing *compared with the defender's capabilities*. The best choice under conditions of no surprise may be quite different from the best choice with surprise. As two Soviet authors noted, "the aggressor might select, for example, another sequence of use of strategic nuclear forces...for a treacherous attack in comparison with that which was specified under the optimum variant."<sup>42</sup>

Such an attack might include the "suboptimal" launch of a "ragged attack" by SLBMs and ICBMs, in which SLBMs and ICBMs are launched at the same time, but arrive 20 minutes apart. The enemy's decisionmaking system might be so stunned by the surprise arrival of SLBMs as to delay response until after the impact of the second wave.

SLBMs also make strikes from many directions possible. In addition, the Soviets have also explored the use of Fractional and Multiple Orbit Bombardment Systems (FOBS and MOBS), which would have made nuclear strikes "from any direction" possible. Such strikes would greatly complicate any enemy strategic defensive measures.

---

<sup>39</sup> Kir'yan, "Vnezapnost'," p. 163; and Jennie A. Stevens and Henry S. Marsh, "Surprise and Deception in Soviet Military Thought," *Military Review*, June 1982, pp. 2-11, at p. 10.

<sup>40</sup> Kir'yan, *Vnezapnost' v nastupatel'nykh*, p. 191. According to the U.S. Joint Chiefs of Staff, the Soviets lag in most technology and lead in none capable of significantly changing military capability over the next 20 years. See U.S. Joint Chiefs of Staff, *United States Military Posture, FY 1987* (Washington, DC: Department of Defense, 1986), p. 16.

<sup>41</sup> A recent example of this is the quieting of Soviet submarines, reportedly due in part to the transfer of specialized equipment by Japanese and Norwegian companies.

<sup>42</sup> Vasendin and Kuznetsov, *op. cit.*, p. 45.

## **5. Unexpected Use of Fire by all Types of Forces and Rapid Maneuver Which Make the Enemy's Response Difficult**

One impact of new technology is the ability to mass firepower in unexpected ways due to increased range and load of various weapons systems. This is in part a consequence of the Soviet interest in maneuverability that has shaped Soviet force developments since the 1930s. Maneuverability increasingly means the ability to bring firepower to bear on a specific location, regardless of whether the platform moves. Thus, aircraft or missiles can be stationed hundreds of kilometers apart, yet come together in a coordinated strike against a single target. In effect, such an approach allows for the concentration of *force*, without requiring the concentration of *forces*.

## **6. Deception and Maskirovka**

Deception and maskirovka are considered critical tools in achieving surprise, and the techniques include camouflage, simulation, feigns, and disinformation.<sup>43</sup> These techniques are applied in peace and during war to create uncertainty for the enemy at every level, from producing fake artillery pieces and deploying forces along a false axis to the camouflaging of ICBM launch sites and the use of penetration aids in missiles.

## **7. Skillful Use of Terrain, Weather, and Time**

Finally, the skillful use of the environment may provide for surprise: an attack at the "wrong" time of day or under the "wrong" conditions can have a devastating effect on an enemy lulled into relative complacency by his own preconceptions. One of the chief advantages of missiles, for example, is that they can be used in virtually any weather conditions. Defending against missiles is a 24-hour job, and any system designed to reduce surprise must be able to operate on such a demanding schedule.

## **C. CONCLUSIONS**

Several general conclusions are apparent in Soviet thinking about surprise:

- Soviet interest in surprise stems from both a desire to surprise an adversary and, in turn, to avoid being surprised.

---

<sup>43</sup> Deception and maskirovka are discussed in detail in the previous study in this series, "Maskirovka: Soviet Military Deception," by Andrew J. Aldrin and Andrew W. Hull, January 24, 1989.

- The importance of surprise has increased in recent years, as the beginning period of a war has become increasingly important.
- Any surprise (from the attacker's perspective) is better than no surprise, and efforts to achieve surprise, even if only partially successful, may provide a critical advantage.
- Surprise can be based on creative military planning, political activity, or new technology.
- Technical surprises in the form of dramatic breakthroughs have become increasingly difficult as weapons systems take longer to develop and require sophisticated facilities and as enemy monitoring capabilities improve.

Soviet concepts of surprise have a number of implications for SDIO:

- The Soviets will almost certainly try to use surprise against SDS, especially in the initial phase of strategic operations.
- Technological surprise is more likely to involve using existing systems in innovative ways, at seemingly inappropriate times, or in unsuspected areas rather than in developing new weapons which are hidden away until conflict begins.
- Soviet maneuvers and training exercises must always be treated by SDS system managers as potential mobilizations for actual combat operations.

## IV. THE NATURE AND IMPORTANCE OF CONTROL TO THE SOVIETS

Traditionally, Soviet leaders have emphasized the necessity of centralized, top-down, goal-oriented, strict control over the society in general and the military in specific.<sup>44</sup> In this context, direction is more than a bureaucratic device. It aims at energizing individuals and organizations to implement deeply held, fundamental goals that have been articulated by the Communist Party.<sup>45</sup>

### A. ROOTS IN TRADITION

Commitment to the concept of control is deeply rooted in traditional Russian culture that juxtaposes control and anarchy. Indeed, when strong control was exercised, the Russian state grew and the centrifugal forces of racial, ethnic, linguistic, and political differences were checked.<sup>46</sup> But these same forces threatened the existence of the empire when control was relaxed. Traditionally, the military has been another major source of unrest by staging mutinies and by being in the forefront of popular revolts. Consequently, Russian culture has long sanctioned the use of overwhelming force (even if arbitrarily applied) to command total obedience except when deceit and trickery allow loopholes for evasion.<sup>47</sup>

Soviet experience has been much the same. Soviet unity seems more a product of tight control from Moscow than personal preference of ethnic minorities. This is well demonstrated by their recent experience with the Baltic Republics where the populous took *glasnost* as an opportunity to press old claims for autonomy and cultural separateness.

The military too has been a source of concern for Soviet leaders over the years. For example, sailors from the Kronstadt Naval Base tried to replace the existing Soviet

---

<sup>44</sup> Ilana Kass and Fred Clark Boli, "Dangerous Terrain: Gorbachev's New Thinking," *Signal*, Vol. 43, No. 4, December 1988, p. 60.

<sup>45</sup> *Ibid.*, p. 60.

<sup>46</sup> E.S. Williams and David Bolton, "Morale, Motivation and Leadership in the Soviet Armed Forces," *RUSI*, Vol. 129, No. 3, September 1984, p. 5.

<sup>47</sup> Ronald Hingley, *The Russian Mind*, The Bodley House, London, 1978, p. 161.



government with a more radical form of communism in 1921. Later, Soviet authorities faced wide-scale desertion to the Germans in the early stages of World War II. More recently, Soviet soldiers from Central Asia (with cultural links to the indigenous population) had to be replaced in the Afghan War with ethnic Russians in part because Soviet Central Asians proved unreliable.

State reasons for maintaining tight control are reinforced by more personal incentives for leaders. The absence of procedures for transferring power from one leader to another has meant the only way a Russian or Soviet leader could be removed over the last 300 years was through death by natural causes, assassination, revolution, or conspiracy by fellow power brokers. Thus, a sitting leader could extend his tenure until his natural demise by maintaining the tightest possible control.

For the above reasons, Soviet emphasis on control is more than an administrative device; it is a central feature of Soviet strategic culture. As such, the concept provides a significant benchmark to Soviet decisionmakers for judging the desirability of particular courses of action.

## **B. TYPES OF CONTROL**

The Soviets emphasize two general types of control in dealing with national defense matters: (1) political control over the military and (2) military operational control. Concern over how to maintain both types will play a large role in shaping how Soviet decisionmakers will evaluate potential countermeasures to SDI.

### **1. Political Control**

The absolute control by the civilian political leadership over the professional military has been the cornerstone of Communist theory and practice since the beginnings of the Red Army.<sup>48</sup> The top Party leadership realized from the earliest days that a standing professional army was essential to Soviet state interests. But at the same time, they and their successors were haunted by the specter of the Army becoming an independent power center. These traditional concerns were further magnified by the advent of nuclear weapons and the frightful consequences that could spring from their use. Consequently,

---

<sup>48</sup> Yosef Avidar, *The Party and the Army in the Soviet Union*, The Magnes Press, Jerusalem, 1983, p. 29.

the political leadership felt compelled to employ multiple measures to assure that its centralized control remained absolute.<sup>49</sup>

One way the Party exercises its control is to assert primacy over certain kinds of military decisions. Communist Party spokesmen routinely assert that the Party: (1) is the leader of the armed forces, (2) "indicates and implements" military policy as well as "develops" military doctrine, and (3) determines the general direction of the life and combat activity of the armed forces.<sup>50</sup> More specifically, a work published through the Soviet Ministry of Defense in the early 1970s affirmed that the political leadership was responsible for: (1) determining an enemy's intentions in a crisis, (2) determining the appropriateness of using strategic means of mass destruction (e.g., nuclear weapons) and implementing military plans, and (3) authorizing the moment of launch should nuclear weapons be deemed necessary.<sup>51</sup> Soviet political leaders today are no less concerned about the absoluteness of their control over all aspects of strategic nuclear decisionmaking. This concern extends both to ensuring that nuclear weapons are not used until authorized by the political leadership as well as ensuring that orders are carried after being issued.<sup>52</sup>

The Party's affirmations of political supremacy over military actions in the above areas are implemented through multiple instruments of control. These included the Main Political Administration (present day successors to the commissars of the original Red Army), Communist Party recruitment of career military personnel, and elements of the KGB.

The Main Political Administration is a creature of the Central Committee of the Communist Party. Political Officers of the Main Political Administration are assigned to every level of the Soviet armed forces for the purposes of boosting morale, teaching Communist Party tenets, and ensuring that military actions comply with Party wishes. Over the years, the degree of control exercised by these Political Officers has varied. Sometimes the orders of a military commander had to be countersigned by the

---

<sup>49</sup> Ibid., p. 45.

<sup>50</sup> *Kommunist vooruzhennykh sil*, No. 10, May 1971, pp. 66-71, as quoted in Herbert Goldhamer, *The Soviet Soldier*, Crane, Russak, and Company, New York, 1975, p. 285.

<sup>51</sup> Herbert Goldhamer, *The Soviet Soldier*, Crane, Russak, and Company, New York 1975, p. 293.

<sup>52</sup> Stephen M. Meyer, "Soviet Nuclear Operations," *Managing Nuclear Operations*, Ashton B. Carter, John D. Steinbruner, Charles A. Zraket, eds., The Brookings Institution, Washington, DC, 1987, p. 487.

corresponding Political Officer to be valid, while at other times the commander only needed to seek the advice of the Political Officer before proceeding.

The Soviet political leadership especially asserts its primacy over strategic weapons. Here control is exercised, in part, through technological means like multiple key systems for launch control, multiple communications channels, and in the past physical separation of warheads and missiles. These technical means are reinforced by using only trusted people in positions to implement launch orders from the political leadership; e.g., 90 percent of all Soviet officers on SSBNs are Party members compared to only 7 percent of the Soviet population and 40 percent for the military in general.<sup>53</sup> There is also a suggestion in Soviet military literature that Political Officers in the Navy are responsible for turning one of the launch control keys aboard SSBNs.<sup>54</sup> Additionally, the Party exercises control via the *nomenklatura*--a list of Party-approved potential candidates for important military posts.<sup>55</sup> Admittedly, membership in the Communist Party does not automatically guarantee the reliability of these people. Nonetheless, it does offer one more safeguard.

The third approach relies on the Committee for State Security (KGB). It maintains a strategic communications network outside military channels to offer the political leadership communications channels which are "secure" from the military. In the past, KGB personnel also had responsibility for storing and releasing nuclear warheads prior to mating with strategic delivery vehicles. Finally, the KGB employs an extensive network of covert informers to watch activities of both the military professionals and the Political Officers of the Main Political Administration. Thus, even the Party's official watchdogs of the military are themselves watched.

## 2. Military Operational Control

The Soviets stress control within the military as much as civilian supremacy over the military. This is achieved through what they call troop control, i.e., the control of military operations and battle management via the military chain of command.

Senior military leaders exercise troop control partly through a large body of officially sanctioned policy literature and formal directives. These include: (1) well-

---

<sup>53</sup> Meyer, op. cit., p. 493.

<sup>54</sup> Ibid., p. 492.

<sup>55</sup> Condoleezza Rice, "The Party, The Military, and Decision Authority in the Soviet Union," *World Politics*, Vol. XI, No. 1, October 1987, p. 76.

publicized laws of warfare based on historical precedent, (2) all-encompassing Soviet military regulations, (3) tightly structured military plans, and (4) carefully worded operational orders,<sup>56</sup> all of which are designed to promote absolute obedience, backed by iron discipline.

Equally important to Soviet ideas about troop control is their concept of "unity of command" or "one-man command." The Soviet *Dictionary of Military Terms* defines "unity of command" as:

A most important principle of the Armed Forces of the USSR. The main essence of unity of command is the personal responsibility of a commander for the morale, discipline, military and political training, combat readiness and combat activity of his subunit, unit, formation or major field force.<sup>57</sup>

The same source goes on to explain:

...the commander retains command and control of all subordinate and attached troops in his own hands, being thus able to concentrate the troops' efforts to attain the common goal of the operations or battle in accordance with the adopted plan.<sup>58</sup>

However, in discussing unity of command, Soviet sources stress it only extends down to the division commander. Lower echelon officers are expected to implement command decisions, not make them.

In addition to giving the commander, at least at the division level and higher, the right to control his assets, unity of command also means that the commander must take personal responsibility for the quality of his decisions and those of his subordinates. Thus, the doctrine of unity of command is a two-edged sword for the commander.

The concept of unity of command is not quite as straightforward as it first appears. Its implied control of professional military men over Political Officers conflicts with the principles of political control discussed above. Soviet authorities have never completely resolved this issue by spelling out exactly which operational situations merit one-man command overriding Party control via the Political Officers. Nonetheless, the numerous public statements remind military leaders that one-man command "does not mean that he [the commander] is free to act as he wishes...[since] one-man leadership in the USSR

---

<sup>56</sup> A.M. Gray, "Soviet Tactical C<sup>3</sup>I," *Signal*, November 1987, p. 40.

<sup>57</sup> As quoted in John Hemsley, *Soviet Troop Control*, Brassy's Publishers Limited, Oxford, 1982, p. 3.

<sup>58</sup> *Ibid.*, p. 3.

armed forces is organized on a Party basis."<sup>59</sup> These exhortations, coupled with the right of Political Officers to bypass the military chain of command and report directly to the Central Committee, ensure that military commanders never venture too far afield without getting approval of the Party's representatives. Thus, the Party has powerful, in-place tools for tightening its control whenever it deems necessary.

### C. OPERATIONAL IMPLICATIONS

The strong emphasis on control over and within the military has implications in the operational arena. These include how forces are employed as well as how individuals carry out military duties.

The entire thrust of Soviet command and control procedures appears aimed at eliminating the freedom of choice from commanders at all levels.<sup>60</sup> Soviet military writers recognized that such an operational philosophy discourages initiative. Consequently, there are frequent exhortations for commanders to take more initiative, but only in a very narrowly defined sense. Indeed, Soviet notions of initiative seem totally at odds with the Western concept. For the Soviets, initiative consists of subordinates' ability to anticipate the intent of the higher commander's plans and to implement them within established directives, operational orders, and applicable regulations.

Despite such admonitions to take the initiative, Soviet soldiers are often reluctant to do so. In part, this reluctance springs from the large number and stricter nature of the criteria used to judge such actions as well as the severity of the punishment meted out for failure.<sup>61</sup> Also, success is not always an excuse for violating regulations and plans when exercising initiative. During World War II, for instance, a Soviet soldier received a decoration for successfully modifying his semi-automatic rifle into a fully automatic weapon. Although given an award for inventiveness, this same soldier was also jailed for several months for a breach of regulations (i.e., defacing government property). Similar incidents over the years have bred a deep-seated skepticism into Soviet soldiers about the wisdom of exercising initiative--a cynicism captured in the Russian aphorism "initiative is punishable."<sup>62</sup> Such cynicism breeds a general unwillingness to take action except when

---

<sup>59</sup> Goldhamer, op. cit., p. 297.

<sup>60</sup> G. Jacobs, "Soviet C<sup>2</sup>: Ideological Concepts," *Jane's Soviet Intelligence Review*, February 1989, p. 60.

<sup>61</sup> Ibid., p. 62.

<sup>62</sup> Ibid., p. 6.

directed to do so by higher authorities or to "bucking" decisions upstairs whenever possible.

Similar anxieties are probably present among senior level commanders as well, given the high price Soviet political leaders have been willing to pay in the past when they felt civilian control over the military was slipping. In the great purges from 1937-1941, for example, Stalin swept away 3 of 5 marshals, all 11 vice-commissars of defense, all 8 admirals, 60 of 67 corps commanders, 221 of 397 brigade commanders, plus 15,000-35,000 other officers.<sup>63</sup> Again, in 1957, when the military seemed to be getting too independent, then Defense Minister and hero of World War II Marshal Zhukov was ousted from all his official positions by Khrushchev. More recently, Marshal Ogarkov appeared to have been removed as Chief of the General Staff at least in part for his publicly stated policy differences with the civilian leadership.

Soviet leaders over the years have also willingly accepted some operational inefficiency in the interest of promoting greater control. One quarter of the Soviet armed forces turns over every six months, hence they face a constant battle to maintain a well trained force. Nonetheless, 30 percent of training time is allotted to ideological indoctrination to assure that the soldiers primary allegiance remains the Communist Party.<sup>64</sup> Similarly, tactical nuclear warheads are now kept physically separate from missiles. Also, Soviet unwillingness over the years to allot a major strategic role to manned bombers may, in part, reflect the leadership's concern about entrusting crews with weapons which could be used equally well against Soviet leaders as against the West.

Exercising wide-ranging top-down control also implies having robust command and control capabilities. As already mentioned, this need is met in part by maintaining multiple, redundant communications channels (e.g., via the KGB, via the military). Soviet leaders have also expressed a cautious approach to military options which would invite the kind of Western retaliation which could jeopardize their span of control. For example, one Soviet argument advanced against using anti-satellite weapons was that it prompted the other side to respond in kind and that this in turn increased the likelihood of nuclear war as both sides lost control mechanisms.<sup>65</sup>

---

<sup>63</sup> John E. Murphy, *An Assessment of Military Influence on Soviet Defense Policy and Party*, Air War College Research Report, No. AU-AWC-85-153, April 1985, pp. 11-12.

<sup>64</sup> Williams and Bolton, op. cit., p. 4.

<sup>65</sup> *Item of Interest: The Soviets and Initial SDI Deployment (Executive Summary)*, Strategic Defense Initiative Organization, 30 April 1987, p. 6.

## D. CONCLUSIONS

The foregoing has a number of implications for assessing the attractiveness of potential Soviet responses to SDI. These include:

- More attractive responses are those consistent with the present Soviet philosophy of tight, centralized, top-down control over strategic system.
- Options which permit Soviet decisionmakers to employ trusted people to provide man-in-the-loop type control are probably more attractive than those which rely on technical means of control only.
- Soviet political leaders seem to place such a high premium on maintaining control that they are willing to accept some operational inefficiencies and curtailment of initiative among those assigned to carry out military operations.
- Soviet political leaders appear uncomfortable with military initiatives which might jeopardize their control links to the military in general and to strategic forces in particular.